# Extreme Products Pocket Guide

#### Modular

#### Product Name and Role

#### **Black Diamond X8**

Cloud Data Center, High Performance Computing, Internet

#### **Key Values**

- High density/performance data center core/ EoR, HPC interconnect fabric, campus backbone, or IXP edge/core switch
- Impressive wire-speed port density supporting 1/10GE, 40GE and 100GE interfaces
- 1G to 10G (copper/fiber) server migration as FoF/MoR solution
- Unmatched performance with 20.48 Tbs capacity, 22.8B pps throughput
- Low-latency applications with 2.3uSec latency across fabric

#### **Key Differentiators**

- From 100MbE to 100GbE coverage
- · High-density with wire-speed
- Low latency leader
- Tier 4 data center class availability with 1+1 control, N+1 fabrics, N+N power
- Orthogonal architecture with cost-effective Strata-XGS technology
- Lower TCO with only 5.6W/10G port power consumption
- Optimized for virtualization and convergence
- MLAG, limited ISSU and EAPS/ERPS support (~50ms failover)
- Unified, modular XOS operating system
- SDN, MPLS and DCBx support



- · Multi-user authentication and policy at scale
- Programmable dataplane for future protocol support
- Application policy support
- Unsampled Netflow at Tbps speeds
- Network Address Translation and server load balancing at scale (NAT and LSNAT)
- GRE tunneling at Gbps speeds
- Versatile front-to-back and side-to-side airflow configuration options
- PoF+ support
- Unsampled NetFlow data on every port for



complete visibility



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Exchange Point



#### S-Series

Terabit-class Modular Switch Routers for Edge-to-Core and Data Center

Engineered with the same Coreflow2 ASICs

QoS functionality and predictable application

Flexible architecture allows deployment from

reducing deployment and maintenance costs

the network edge to core and data center,

and simplifying management

performance

capabilities

- as the S-Series for deep visibility and control without impacting performance Versatile, high-density edge to small core
- switch Cost-effective, flow-based switching
- High performance/capacity in a small form factor for cost optimization



Cost-effective Modular Switch with Premium Features for Enterprise Campus Edge-to-Small Core



#### Product Name and Role **Key Values Key Differentiators** Campus edge/core, data center edge/core or From 10MbE to 40GbE coverage SP aggregation switch • High-density 1GbE and 10GbE connectivity with Excellent cost-effective performance with 1GE, cost-effective 40GbE 10GE and 40GE interfaces Optional PoE 3.8Tbps capacity with 2.8 Bpps throughput • Versatile extensible backplane architecture with multiple cost/scale IO options Cost-effective Strata-XGS technology · XL blades for internet connectivity **Black Diamond 8000** MLAG, limited ISSU and EAPS/ERPS support (~50ms failover) Campus Edge/Core, Data Center or SP aggregation switch SDN and MPLS support Unified, modular XOS operating system **Fixed** High-density, low latency Top · Highest density in the industry of Rack (ToR) switch with 32 x 40GE interfaces Low latency (less than 600ns) Can support up to 104 ports of 10GE • 1588 PTP timing support Summit X770 · Designed to meet NEBS requirements High-density ToR data center switch · Optional DC power • Modular fans with reversible airflow · Heterogeneous stacking with other Summit switches • EAPS/ERPS support(~50ms failover) VEPA and TRILL support Unified, modular XOS operating system Top of Rack (ToR) switch with 48 x 10GE 40 GE uplinks fiber interfaces · High density Both copper and fiber options available Low latency (less than 920ns) Summit X670V Copper model supports dual ports for either copper or fiber to address distance issues Verasatile ToR data center switch MPLS support • Designed to meet NEBS requirements · Optional DC power Modular fans with reversible airflow Heterogeneous stacking with other Summit switches EAPS/ERPS support (~50ms failover) · VEPA and TRILL support · Unified, modular XOS operating system Data center Top of Rack switch with 24 or 48 · High-density, cost-effective 10Gbase-T support 1GE and 10GE interfaces 40GE uplinks Supports advanced features such as Data · Dynamic policy support Center Bridging (DCB) and Virtual Switch · Modular fans with reversible airflow Bonding (VSB) VSB stacking with 7100G-Series Identical software features as the S-Series and K-Series modular switches (without CoreFlow2 support)



High density 10 Gigabit Ethernet

7100K-Series

data center switch

<ul> <li>Key Differentiators</li> <li>High density</li> <li>Low latency (less than 710ns)</li> <li>MPLS support</li> <li>Designed to meet NEBS requirements</li> <li>Optional DC power</li> <li>Modular fans with reversible airflow</li> <li>Heterogeneous stacking with other Summit switches</li> <li>EAPS/ERPS support (-50ms failover)</li> <li>Unified, modular XOS operating system</li> <li>Custom ASICs for unique CoreFlow2 support</li> <li>Modular switch capabilities in a fixed platform</li> <li>Flexible airflow options</li> </ul>
Low latency (less than 710ns)     MPLS support     Designed to meet NEBS requirements     Optional DC power     Modular fans with reversible airflow     Heterogeneous stacking with other Summit switches     EAPS/ERPS support (-50ms failover)     Unified, modular XOS operating system      Custom ASICs for unique CoreFlow2 support     Modular switch capabilities in a fixed platform
CoreFlow2 support     Modular switch capabilities in a fixed platform
10 and 40 GE uplinks     Designed to meet NEBS requirements     Optional DC power     Modular fans with reversible airflow     Heterogeneous stacking with other Summit switches     EAPS/ERPS support (-50ms failover)     Unified, modular XOS operating system
40GE uplinks     Dynamic policy support     Extremely cost-effective model supporting 24 copper and 24 fiber on one chassis     Modular fans with reversible airflow     VSB stacking with 7100K-Series
Optional DC power     Designed to meet NEBS requirements     MPLS Support     Modular fans with reversible airflow     Heterogeneous stacking with other Summit



Product Name and Role	Key Values	Key Differentiators
######################################	High-performance edge switch with 10/100/1000 and SFP interfaces Highly customizable Layer 3 switch with advanced routing capabilities Supports 10GE uplinks	Dynamic policy support     PoE+ support
High-Performance Edge Switch with Dynamic Policy		
B-Series	Cost-effective Layer 2 switch with 10/100/1000 interfaces  Supports 10GE uplinks  Layer 2 switching with basic routing and dynamic policy	Dynamic policy support     PoE+ support
Cost-effective PoE+ Stackable Edge Switch		
	Edge switch with 10/100/1000 copper and fiber interfaces     12, 24 and 48-port models     Support for Layer 2 and basic Layer 3 routing     PoE+ support     Fanless 12-port, non-PoE option available	Fixed power supply with external redundant power supply available  DC power available  Heterogeneous stacking with other Summit switches  EAPS/ERPS support (-50ms failover)  Unified, modular XOS operating system
Summit X440  Cost-effective PoE+ Stackable Edge Switch		
To the second se	Entry-level tabletop edge switch with PoE support     Supports 12-ports of 10/100/1000 interfaces     Small form factor for installation anywhere     Fanless operation for quiet environments	Dynamic policy support     PoE support
D-Series		
Gigabit Ethernet Workgroup L2 Switch with Optional Policy Support		



Product Name and Role	Key Values	Key Differentiators
A-Series	Cost-effective yet full-featured edge switch with 10/100 interfaces Supports 24-48 ports Supports 100BASE-FX	Dynamic policy support     PoE support
Fast Ethernet, policy-enabled Layer 2 switch		
\$ \$300 \$300 \$300 \$500 \$500 \$500 \$500 \$50	<ul> <li>Entry-level switch with 10/100/1000 interfaces</li> <li>Layer 2 switching only</li> <li>No stacking capability</li> <li>Runs XOS</li> <li>Supports 24 or 48 ports</li> </ul>	Fixed power supply     No PoE support     Unified, modular XOS operating system
Entry level access or cost-effective edge switch		
800-Series  Versatile and cost-effective access switch	Entry-level access switch supporting 10/100 and 10/100/1000 interfaces     Versatile lineup with 8, 24 and 48 port models	PoE+ support     No dynamic policy support
	Mobile Carrier	
E4G-400  Mobile Backhaul switch for Service Providers	Stackable cell site router with Layer 2 and 3 transport and clock synchronization for service provider mobile backhaul applications	Stackable Higher port density TDM support (only product with E1/T1) I588 PTP and SyncE timing support NEBS Certified Optional DC power EAPS/ERPS support (-50ms failover) Unified, modular XOS operating system
E4G-200  Mobile Backhaul switch for Service Providers	Cell site router with Layer 2 and 3 transport and clock synchronization for service provider mobile backhaul applications	TDM support (only product with E1/T1)  1588 PTP and SyncE timing support  Temperature hardened to 65°C  NEBS Certified  Optional DC power  EAPS/ERPS support (-50ms failover)  Unified, modular XOS operating system



#### Key Values Product Name and Role **Key Differentiators** IdentiFi Adapts to customer's business needs by Optimized for high-density deployments as simultaneously supporting bridge@AP, validated in stadiums such as the New England bridge@controller, and route@controller Patriots and Philadelphia Eagles. data paths within the same SSID (unique in No traffic bottlenecks - Ethernet ports designed to the industry) process Wi-Fi traffic as fast as it comes in. Supports high-density of users, APs, Independent, intelligent APs do not require and applications such as Bonjour with controller access to provide security, RF optimized data paths and role-based QoS management and spectrum analysis. Combines and access control the scalability of a centralized design with the IdentiFi™ Indoor WIDS, WIPS, Spectrum analysis, QoS, and roleflexibility and performance of a distributed based access control are built into the network **Access Points:** and not bolted-on providing un-parallel visibility, security, and control. AP3705i AP3710i/e AP3715i/e Full range of indoor APs priced to provide Wi-Fi connectivity for any situation. Purpose built for education, healthcare, large venues, manufacturing, hospitality, and challenging RF environments • Use these to extend Wi-Fi beyond the building These are IP65/NEMA4 certified for use in extending Wi-Fi access outdoors. These will harsh manufacturing environments and severe still be part of the overall Wi-Fi installation weather conditions. using the same policy and single pane of glass The AP3767 also comes with 2 x SFP E/N ports management as the indoor APs. for extended distances over fiber. Perfect for stadiums and other outdoor venues. IdentiFi Outdoor **Access Points:** AP3765i/e AP3767e Industrial grade access points designed to operate in harsh environments such as warehouses, mines, manufacturing plants, and stadiums. Flexibility allows appliances to simultaneously Scales from small branch to large enterprise to control all APs, some APs or allow APs to run independent of appliance. Full management through the appliance or Can be deployed as a managed service centralize management with Netsight. where appliances are centralized and APs. Optimized for data convergence (voice, video, geographically distributed and data) Built in high availability is included with sub-Hardware-based encryption acceleration for up to one second failover to maintain 18Gbps of data capacity voice connectivity. IdentiFi Appliances C25 V2110 C5210 Virtual or physical appliances provide role based controls for Wi-Fi



users, devices and applications.

# Product Name and Role

#### Built into the IdentiFi Wi-Fi solution provides greater RF visibility and control than using a 3rd party solution. Integrated with NetSight for single pane of glass Wi-Fi/wired management.

### **Key Differentiators**

- Flexibility allows the customer to use solution option best suited to their needs:
- Radar with NetSight Advanced

#### IdentiFi Radar

Wi-Fi security and spectrum analysis. Simultaneous Wi-Fi access and assessment mode or full time assessment with Guardian mode.

# **OneFabric Control Center**



#### A single management system for the entire network providing consistent management across all devices. This saves time and money by eliminating duplication of efforts

NetSight is standards based and can easily

support SNMP based third party devices in

Cut down the time it takes to troubleshoot

Enables easy policy enforcement network-

wide for QoS, bandwidth, etc. ensuring

the availability of today's bandwidth

addition to the Extreme family of devices

and manage any network - NetSight provides a graphical and exceptionally easy-

to-use interface

intensive applications

**Key Values** 

Single management system for the entire network infrastructure - wired, wireless, 3rd party

#### An open and published interface (or API)

- Future proof NetSight easily scales from the smallest to the largest network
- Fliminate manual tasks with built in automation

#### NetSight

NetSight is the heart of the OneFabric™ Control Center family of management and security solutions. NetSight is a single pane of glass management system that provides wired/wireless visibility and control from the data center to the mobile edge

- Understand application usage to increase
- Purview is pervasive across the network from datacenter → distribution → access edge.

# productivity and revenue

## No chokepoint in the network

- Transform unknown or unrelated application data into meaningful business intelligence
- Ease-of-use; Purview is Integrated with OneFabric Control Center providing a single management system
- Optimize application performance for improved user experience
- Detect malicious applications

- First Solution to transform the network into a strategic business asset
- Actionable context-based knowledge about applications, users, locations and devices
- Over 13,000 open and customizable fingerprints
- Complements and integrates with other third party management products
- Massive scalability Purview works at Terabit speeds and can collect millions of flows per minute without any performance impact to the switch



Purview™ is a Network-Powered

Application Analytics and

Optimization Solution

## Mobile IAM (BYOD)

Mobile IAM is "BYOD Done Right," a comprehensive BYOD solution that provides total security, full IT control and predictable network experience for all users.

- Take control of today's demanding BYOD challenges - Mobile IAM with end-to-end visibility and control over individual users, devices and applications, in multivendor infrastructures
- The flexibility to choose the appropriate access restrictions for guests/contractors, or any other network user based on role, device/OS type, location, time of day, etc.
- Easy and transparent onboarding for users, cost savings for IT
- Centrally manage and control the security posture of all devices connecting to the network, including employee bring your own device (BYOD)
- Restrict access for guests to public Internet services only or allow more
- Managed guest access control with sponsorship, SMS verification, pre-registration, and other options
- Comprehensive dashboard reporting

#### Product Name and Role



#### **Network Access Control (NAC)**

Extreme NAC is a standards-based, multi-vendor interoperable NAC solution for wired and wireless LAN and VPN users. It provides business-oriented visibility and control over individual users and applications in multi-vendor infrastructures.

## Key Values

- Provides user identity functionality including discovery, authentication and role based access controls
- Protects corporate data by proactively preventing unauthorized users, compromised endpoints, and other vulnerable systems from accessing the network
- Address compliance and regulatory requirements by control access to sensitive data and then providing comprehensive reporting on user activity. Additionally reporting data can be exported to other third party reporting tools
- Flexibility to choose between virtual and physical NAC appliances to best meet the needs of the business
- Investment protection Can be easily deployed in an Extreme only, mixed or non-Extreme environment providing exceptional access control in all cases

## Key Differentiators

- Configuration options provide an unparalleled range of choices for fine grained network control including time of day, location, authentication types, device and OS type, and end system and user groups
- Automated guest access control with sponsorship, SMS verification, pre-registration, and other options
- Easy integration with third party management tools for MDM, Next Generation Firewall (NGFW), SEIM, IPS and more
- Ability to link with other business processes such as LDAP and RADIUS



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